

Remarks

Claims 2, 3, and 5-10 are pending in the subject application. By this Amendment, claims 2, 3, and 6-10 have been amended. Upon entry of these amendments, claims 2, 3, and 5-10 will be before the Examiner. Favorable consideration of the pending claims is respectfully requested.

Claim 2 has been amended to emphasize that "a by-pass diverged from the slurry supply line" is an element of the claimed apparatus. No new matter has been introduced by this amendment.

The rejections of Claims 7-10 both under 35 U.S.C. § 112, first paragraph, and 35 U.S.C. § 112, second paragraph have been obviated by the above amendments. Support can be found, at least, at paragraphs [0029]-[0031] of the specification. No new matter has been introduced by these amendments. The Office Action, at page 2, states that "it is best understood by the examiner that the applicant is trying to claim that the slurry is more dense and has more particles when there is more diluent solution supplied and less slurry supplied." However, this is a misunderstanding. Claims 7-10 refer to the determination of the density and number of particles in the solution of the slurry supplied to the slurry injection nozzle based on the information collected and calculations performed in the by-pass. The amendments to claims 7-10 have been made to clarify this point.

The rejection of Claims 3 and 6 under 35 U.S.C. § 112, second paragraph, have been obviated by the above amendment. The Specification has also been amended accordingly. No new matter has been introduced by these amendments. The term "composition" has been replaced with "ingredient" in order to clarify that the "same composition" refers to the classification of the slurry based on the kinds of particles it contains, not a solution with the same concentration or density as the slurry being measured.

Claims 2, 3, 5, and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Farkas *et al.* (U.S. Patent No. 5,710,069) in view of Cerni *et al.* (U.S. Patent No. 6,275,290) and Kondo *et al.* (U.S. Pat. App. No. 2002/0061722). Applicant respectfully traverses. A *prima facie* case of obviousness has not been presented. Three criteria must be met to establish *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations.

Regarding claim 2, the Office Action admits at pages 5-6 that "Farkas also fails to disclose that the photo image sensor is to be located on a bypass diverged from the slurry supply line or that the apparatus comprises a diluent solution supply unit to supply diluent solution into the bypass to reduce a concentration of particles in the slurry."

Cerni *et al.* does not cure these defects. The Office Action states, at page 6, that "Cerni further discloses a bypass diverged from the main supply line that passes a portion of the slurry through a cross-section to be monitored and analyzed by the photo image sensor (fig. 3)." However, if one modifies the apparatus of Farkas to incorporate the by-pass of Cerni *et al.*, there would be no motivation to include a diluent solution supply unit as taught by Kondo *et al.* to supply diluent solution into the bypass. In fact, Cerni *et al.* teaches away from a diluent solution supply unit. In particular, Cerni *et al.* teaches, at the abstract, that "[t]he probe accomplishes continuous, real time sampling of undiluted slurry;" and then, at col. 2, lines 1-5, that "[i]t is also desirable to measure the particle size distribution of undiluted slurry because dilution and the subsequent change in pH can alter the distribution." (Underline added). Therefore these references, alone or in combination, do not teach or suggest a diluent supply unit to supply diluent solution into the bypass to reduce a concentration of particles in the slurry, and therefore do not teach or suggest supplying diluent solution into a bypass for reducing a concentration of particles in the slurry.

Regarding claims 3 and 6, the claims have been amended to recite "wherein the diluent solution is a solution with the same ingredient as the slurry solution." Kondo *et al.* does not teach or suggest a diluent solution being a solution with the same ingredient(s) as the slurry solution.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103(a) rejection of claims 2, 3, 5, and 6.

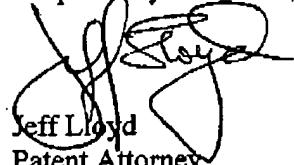
In view of the foregoing remarks and amendments to the claims, Applicant believes that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

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The applicant invites the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachments: Petition and Fee for Extension of Time.